

W5YI REPORT

Up to the minute news from the worlds of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

Dits & Bits

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VOL. 8, Issue #16

\$1.50

PUBLISHED TWICE A MONTH

August 15, 1986

Ham Question Pools to VEC, Test Design to VE

Meeting at the FCC in Washington, DC, last Friday, Volunteer-Examiner Coordinators were introduced to newly adopted procedures that further deregulated the Commission's amateur radio operator testing program. All major VEC organizations attended - representing some 90% of the amateur radio operator examinations administered worldwide.

A Report and Order in PR Docket 85-196, adopted just a few days earlier, was released to the public at the VEC conference. In it were new guidelines transferring the responsibility for maintaining the question pools for amateur operator written examination elements in the VE system from the Commission to the Volunteer-Examiner Coordinators. A VEC acts as the administrative link between the volunteer examiner and the FCC.

The new rules also clarified that VE's solely have the responsibility for determining the correctness of a candidate's answers to the questions (without appeal) as part of their duty to grade each examination element.

BACKGROUND OF THE PROCEEDING....

On September 13, 1982, Public Law 97-259 amended the Communications Act to allow the FCC to accept and employ the voluntary services of amateur operators in the preparation and administration of amateur operator examinations. The Novice license had

always been given by a single volunteer examiner.

On December 1, 1983, the Commission implemented a new VEC program for the other four operator classes. (Docket 83-27) The system provided for Volunteer examiners (VE's) administering written tests designed by VEC's who systematically selected questions from a FCC developed question pool. The volunteer testing program was turned over to the amateur community in stages. At first the FCC selected the questions from the pool - later VEC's were authorized to design the examinations.

Some 1600 persons each month qualify for the beginner Novice license while another 4000 persons are examined for the higher licenses in over 300 VEC-coordinated sessions. Twenty-five different VEC's coordinate examination sessions in a total of 75 different regions. Each amateur call sign district is a separate region, as is Alaska, Hawaii and the Caribbean. (There are actually 14 different regions since each VEC can also arrange examinations outside of the U.S. and its possessions.)

As part of the 1983 volunteer ham testing implementation, the FCC proposed to further deregulate the program to its next stage after the VE system had been in place three years. Recommended were:

(1.) maintenance of the question pool from which written examination questions are drawn be transferred to the VEC beginning January 1, 1987, and...

(2.) VE's (in addition to VEC's) would be authorized to select the specific question sets to be administered to candidates.

In other words the program would be dropped one level. ...question pool development transferred to VEC's (a previous FCC function), test design to the VE (currently a VEC function) - with the FCC stepping out of the examining picture completely except for routine supervision.

COMMENTS ON THE PROPOSAL....

Standardization and uniformity of the written examinations was a major concern. The ARRL wanted the FCC to continue to maintain the question pools since allowing each VEC to have a separate question pool "would be a step away from uniform standards and fairness (and) toward shopping (by an applicant) for the easiest examination." The League said such "forum shopping" would undermine the integrity of the Volunteer Examiner program and thus the service as a whole. "VEC's should not be subjected to accusations of using unfair questions and that the only means of assuring standardization and high-quality question pools is to have the Commission give its stamp of approval to them." The League also questioned transferring the selection of the questions to the VE noting that "VE's are already burdened."

Marty Schwartz, KB2LO, publisher of the AMECO license preparation materials also opposed multiple question pools "since it would make it impossible for a publisher to compile a textbook of questions." He also argued that a monopoly would be created for VEC-publishers because applicants would purchase study materials only from them. He wanted question pool maintenance to remain a Commission function.

Others supported the proposal noting that "it is unrealistic for the Commission to continue to maintain the question pools in view of budgetary constraints" and "VEC's have the capability or maintaining question

pools." Some thought turning the question pools over to the VEC's would cause VEC's to expend more time and effort and increase their costs.

FCC DISCUSSION ON THE PROPOSAL....

The Commission agreed that the matter of amateur radio testing standardization was important and said that strict examination guidelines would be summarized in the rules. The FCC noted that any greater standardization must be achieved through the cooperative effort of the various VEC organizations.

Responding to concerns for the quality of examinations, the FCC said the present questions are worded to permit the use of a variety of answer formats. "Thus, while the majority of VE's elect to use the multiple choice format, they could also use true-false, fill-in-the-blank, and essay formats. Second, the Commission does not supply the answers to any of the questions. Thus the potential exists at the present time for examinations to be constructed in such a way as to make the right answers obvious. But this has not occurred. The multiple choice answers have been of high quality. Moreover, there has been a high degree of standardization in the answers brought about through mutual cooperation of the VEC's. There is no reason to believe that this would change if the responsibility for the root questions also rested with the VEC's."

The FCC said that they do indeed have the statutory authority to allow VE's to prepare examinations due to the broad authority given the Commission to utilize the services of amateur licensees in ways that will be most beneficial in assisting us with the operator examination workload, including maintenance of the question pools by VECs." The enabling legislation "does not imply that the preparation of examinations must be solely a Commission function."

"The burden upon VE's of selecting examination questions is not a compelling reason to continue requiring that only the VEC can select the question sets. The VE's could still use VEC-supplied question sets. Furthermore, they could use suitable pre-packaged

"I am a currently licensed Extra Class amateur radio operator and wish to be a volunteer examiner. I have never had my station or

WOULD YOU LIKE TO BECOME A VOLUNTEER EXAMINER?
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question sets from a source which used the same (VEC determined) algorithm (test construction formula) and standards required of the VE's, as long as concerns for security were met."

Thus volunteer examiners are not only permitted to design their examinations, but are free to continue obtaining them from their VEC ...or even purchase them in the publishing marketplace as long as a system exists precluding disclosure of exact test questions selected from the pool. Such a system might be a random selection scheme on a computer disk containing all test questions.

Referring to AMECO's, (Marty Schwartz) concern of a possible VEC publishing monopoly, the FCC said "...no VEC-publisher can prepare study materials which are in any way keyed to a specific test. Moreover, we will not permit any VEC to use a question which has not been made available to the public well in advance. Given these standards, no publisher is at a disadvantage to any other from the standpoint of questions in use..."

QUESTION POOLS AND TEST DESIGN

The Commission said that after carefully evaluating the comments they have concluded that the public interest would be served by transferring maintenance of the question pools for amateur examinations to the VEC's. "We believe that standardization can be achieved through cooperative efforts of the VEC's, through the standards which will be in the rules and by recourse to the question pools that we have maintained."

The January 1, 1987, date that the VE's can begin preparing question sets was moved up from January 1, 1987, to immediately upon routine Office of Management and Budget approval of the new procedures. OMB concurrence is necessary since the new procedures involve an additional paperwork burden. Quick approval is expected.

VEC's were instructed to use the current FCC question pools as their base for the time being. "However, the pools should not remain static, but should track the dynamism in amateur radio technology. We anticipate

that VEC's and VE's will be responsive to new developments and update the question pools as needed," the FCC said.

The new rules also provide for a new type of volunteer examiner - the Preparing Volunteer Examiner. The current VE will now be referred to as an "Administering VE" - one of three VEC-accredited amateur operators who administer examinations to candidates for amateur operator licenses. A Preparing VE is one who submits questions or prepares written or telegraphy examinations for amateur operator licenses. He need not be VEC accredited, but must hold an amateur operator license of a class higher (if one exists) than the examination being prepared.

A Preparing VE is also permitted to supply (market) pre-packaged question sets and telegraphy messages to Administering VE's if they are consistent with the coordinating VEC's published instructions and design formulas. Preparing VE's are not permitted to provide specific test designs to applicants since Part 97 rules require that these be held secure against disclosure.

The transfer of the question pools to the VEC's has resulted in the deletion of PR Bulletins 1035A, B, C and D which contain the FCC question pools. A new percentage system was adopted for selecting questions from various topics in the new VEC maintained pools. Provision was made for tests with more questions than is now the case. PR Bulletin 1035 - the amateur radio operator license examination study guide (syllabus) - was also eliminated.

New written examinations must contain a question set as follows:

- Element 2 - At least 20 questions on Novice privileges.
- Element 3 - At least 50 questions concerning additional privileges of Technician and General class licensees.
- Element 4A - At Least 50 questions concerning additional privileges of Advanced Class licensees.
- Element 4B - At least 40 questions concerning additional privileges of Amateur Extra Class licensees.

The topics and percentage of questions in each question set shall be that listed for the appropriate examination element:

		== Elements ==			
Examination Topics:		2	3	4A	4B
(1.)	FCC Rules	35%	18%	12%	20%
(2.)	Operating Procedures	5%	12%	2%	10%
(3.)	Radio Wave Propagation	5%	12%	4%	5%
(4.)	Amateur Radio Practices	15%	8%	20%	15%
(5.)	Electrical Principles	15%	8%	20%	15%
(6.)	Circuit Components	5%	6%	12%	10%
(7.)	Practical Circuits	5%	4%	20%	10%
(8.)	Signals & Emissions	5%	8%	12%	10%
(9.)	Antennas & Feed Lines	10%	14%	10%	10%

New Part 97.27(b) now provides for examinations being prepared by either the VEC or the administering VEs according to instructions from their coordinating VEC.

New Part 97.27(c) specifies that neither the same telegraphy message nor the same question set may be readministered to the same person.

New Part 97.27(d) requires that each VEC and VE must hold telegraphy messages and question sets for current and future examinations in confidence.

New Part 97.29 specifies that the examiners are responsible for determining the correctness of the candidate's answers.

New Part 97.517(a) authorizes VEC's to provide VE's with code and written tests.

New Part 97.517(b) specifies that only Extra Class amateurs may prepare Element 1B (13 wpm) and 1C (20 wpm) code exams. Element 1A (5 wpm) may be prepared by Extra, Advanced or General Class VE's.

New Part 97.517(c) specifies that only Extra Class amateurs may prepare question sets or submit pool questions for Elements 4A and 4B. Advanced and Extras: Element 3. Extra, Advanced, General or Technician: Element 2.

New Part 97.521 outlines VEC question pool requirements. Each question pool must contain at least ten times the number of questions required for a single examination. No question may be used unless it appears in a published list made available to the public prior to its use for making question sets.

New Part 97.21(b) specifies that a telegraphy examination shall consist of a prepared message containing all the letters of the alphabet, numerals 0-9, period, comma, question mark, AR, SK, BT, and DN. Previous Part 97.27(a&b) stated that "The applicant is responsible for knowing, and may be tested on... etc."

GRADING OF AMATEUR EXAMINATIONS

The FCC provided a means for volunteer examiners using other than printed questions and written answers when administering examinations. "In anticipation of more reliance on computer assistance by administering VE's, the rule amendments are sufficiently flexible to accomodate other examination methods such as administering examinations at a computer terminal where the candidate will read a question from the screen, answer the question by stroking an appropriate key and have it graded and the results recorded immediately," the FCC wrote in their August 4th Report and Order. Again it appears that computer generated tests/grading could be widely marketed and used.

The FCC made it clear that "Our experience to date with volunteer examining indicates to us that VE's are highly competent and dedicated to their tasks. All three VE's have passed the examination they are administering. They have also passed the next higher examination if there is one. While the administering VE's may obtain appropriate answers from the VEC or other sources as an aid in grading the candidates answers, the responsibility for correctness of an answer given remains with the administering VE's."

AUGUST 8TH - 1986 VEC CONFERENCE....

The 1986 Conference of VEC's got underway at the FCC in Washington at 9:00 a.m. sharp. Ray Kowalski, the FCC's Chief of Special Services defined the conference objectives. The theme was "Maintaining Questions and Integrity." Many of the FCC staff were also in attendance.

Certain amateur radio issues were placed "off limits" for discussion since these

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matters were now before the FCC for final consideration. These included (1.) credit for written examinations, (2.) repeater coordination, (3.) microwave access, (4.) packet radio traffic reconsideration and (5.) enhancing Novice privileges.

Both Jim Clary, WB9IHH, ARRL-VEC manager and Tom Ingram, K4OOV, Central Alabama VEC manager (and president of CARE, Council for Amateur Radio Examiners) were provided with pre-release copies of the VEC Question Pool Maintenance rulemaking prior to the meeting so that they could review it before making their presentations on "Preparation, Maintenance and Utilization of Question Pools."

The new rulemaking was discussed and it was unanimously agreed that it would be in amateur radio's best interest if one set of pool questions was used by all VEC's. Answers would be provided as a convenience to VE's. Three VEC's in attendance were selected to form a "Committee for Question Pool Maintenance." This consisted of Ray Adams (N4BAQ) of the Western Carolina VEC, Jim Clary (WB9IHH), ARRL-VEC and Gordon Girton (W6NLG) of the Sunnyvale VEC (California). Although the revisions to the pools will come from many sources, these individuals will form the final pool question evaluation committee. Jim Clary said that his participation would be contingent upon ARRL Director approval.

Jim Clary advised the implementation date of revised ARRL examinations:

Test Element:	Released:	Implement:
Element 2/Novice	July 1986	Jan. 1987(*)
Elem. 3/Tech-Gen	Oct. 1985	April 1986
Elem. 4A/Advanced	Jan. 1986	July 1986
Elem. 4B/Extra Cl.	April 1986	Oct. 1986

It was decided that publishers and instructors need a longer implementation period for new examinations. VEC's present voted in favor of a one year moratorium on revising existing question pools except for "Topic 1" - FCC Rules and Regulations. Thus no new question pools will be implemented until after January 1, 1988. (*) The new FCC developed Element 2/Novice question pool was distributed to each VEC, but will not be

implemented. The new Extra Class pool released in April will be used effective October 1st, however.

A special "dutch treat" luncheon of area amateur radio operators took place at Gusti's Restaurant near the main FCC office building. After lunch, Jim Georgias, W9JUG, (DeVry VEC) and Ray Adams, N4BAQ, (Western Carolina ARS) both gave excellent presentations on testing integrity and testing room control procedures.

The FCC pointed out that not only are VEC pass rates monitored, but also those of geographical areas. Puerto Rico appears to have a higher pass rate than other areas. A procedure was adopted authorizing FCC supervised retesting of applicants when the retesting is requested by the same VEC as coordinated the original examination session. The FCC will utilize the resources of a different VEC when retesting is necessary.

Gordon Girton, W6NLG, Sunnyvale VEC spoke on VEC record retention and also offered a novel approach to transmission of testing information and applications to Gettysburg via landline packet switching. VEC's will retain all test session records for a period of 15 months. Rosters of applicants and their test result summaries will be retained until further notice.

The 1987 Conference of VEC's is scheduled to be held at the ARRL National Convention in Atlanta on July 17th.

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JULY 1986 VE PROGRAM STATISTICS....

	<u>July 1985</u>	<u>1986</u>
No. VEC's	65	75
No Testing Sessions:	279	328
ARRL 50.0% (1986)		
W5YI 17.4%		
CAVEC 7.6%		
DeVRY 7.3%		
Others 17.7%		
No. Elements Administered:	4639	4948
ARRL 53.6% (1986)		
W5YI 12.6%		
CAVEC 8.8%		
DeVry 6.6%		
Others 18.4%		

	July 1985	1986
Year-to-Date Elem.Adm.:	39394	39008
No. Applicants Tested:	3173	3437
ARRL 54.8% (1986)		
W5YI 12.2%		
CAVEC 8.3%		
DeVRY 7.4%		
Others 17.%		
Pass/Upgrade Rate, All:	57.9%	58.7%
Pass/Upgrade Rate, W5YI:	62.6%	55.0%
Applicants per Session:	11.4	10.5
Applicants per Session/W5YI:	9.1	7.6
No. Elements per Applicant:	1.46	1.44
No. Sessions per VEC:	4.29	4.37

(Source: FCC, Washington, D.C.)

AMATEUR RADIO CALL SIGNS....

issued through the first of August.

Radio District	Gp."A" Extra	Gp."B" Adv.	Gp."C" Tech/Gen	Gp."D" Novice
0	NU0D	KE0HK	N0HJB	KA0YMF
1	NG1D	KB1ZQ	N1EHO	KA1OUF
2	NT2F	KD2UP	N2GNN	KB2BJU
3	NC3K	KC3YT	N3FBP	KA3PXZ
4	AA4VD	KJ4YE	N4OMW	KB4UGB
5	WO5O	KF5PP	N5JOP	KB5AMH
6	WW6C	KI6IT	N6OBJ	KB6NST
7	NW7B	KE7TD	N7ILX	KA7ZLW
8	NS8X	KE8GR	N8HSC	KB8ADW
9	NM9Z	KD9YV	N9FZL	KA9VXN
N. Mariana	AH0E	AH0AC	KA0AI	WH0AAG
Guam	AH2W	AH2BI	KH2CC	WH2AJZ
Johnston Is.	AH3A	AH3AC	KH3AB	WH3AAC
Midway Is.		AH4AA	KH4AD	WH4AAF
Palmyra/Jarvis	AH5A (*)			
Hawaii	(**)	AH6HF	NH6GU	WH6BKF
Kure Is.			KH7AA	
Amer.Samoa	AH8B	AH8AC	KH8AD	WH8AAW
Wake Wilkes	Peale	AH9AC	KH9AC	WH9AAE
Alaska	(**)	AL7IE	NL7IY	WL7BKW
Virgin Is.	KP2O	KP2BA	NP2BV	WP2AFA
Puerto Rico	WP4T	KP4KU	NP4YE	WP4FXQ

(*) The first AH5 prefix was issued to a station to operate from Palmyra Island in the Kingman Reef. There is also one other numerical U.S. DX prefixes that has never been issued ...AH/KH/NH/WH1 - Baker, Howland Island in the South Pacific. Palmyra/ Jarvis/-Baker/Howland are about 1,000-1500 miles southwest of Hawaii.

All Group "A" call signs have been assigned in Alaska and Hawaii. Group "B" (2 by 2) format now being assigned to Extra Class.

CALL SIGN PREFIX ISSUANCE SEQUENCE for Amateur Call Signs in Contiguous U.S.A.

From time-to-time we get inquiries regarding upcoming amateur call sign prefix blocks by license class. Call signs seem to be of monumental importance to an amateur - important to many as changing your name!

The "assignment system" was spelled out in an FCC Public Notice issued on October 26, 1977. Phase I of the system was implemented on March 24, 1978.

EXTRA CLASS 2 by 1 call sign format NA,B,-C,D,E,F,G,I,J,K,M,N,O,Q,R,S,T,U,V,W,X,Y,Z (then) WA,B,C,D,E,F,G,I,J,K,M,N,Q,R,S,T,U,V,-W,X,Y, Z (then 2 by 2 call sign format) AA,B,-C,D,E,F,G,I,J,K (Then GROUP B/Advanced Class format)

ADVANCED CLASS all 2 by 2 call sign format KB,C,D,E,F,G,I,J,K,M,N,O,Q,R,S,T,U,V, W,X,Y, Z (except KC6 and KX6 - then) NA,B,C,D,E,-F,G,I,J,K,M,N,O,Q,R,S,T,U,V,W,X, Y,Z (then) WA,B,C,D,E,F,G,I,J,K,M,N,O,Q,R,S,T,U,V,W,X, Y,Z, (then GROUP C/Tech-General call signs)

TECHNICIAN/GENERAL CLASS

"N" and "W" 1 by 3 format - then GROUP D/-Novice. [Note: The "N" calls will not expire for at least five years. At that point it will be interesting to see how the FCC will handle the next-in-line "W" by 3 call signs since many are now assigned. It will be the first opportunity for an amateur to obtain a "recovered" call according to the call sign assignment system. We understand that the FCC computer in Gettysburg does not have the capability to skip already assigned call signs.]

NOVICE CLASS all 2 by 3 call sign format.

KA,B,C,D,E,F,G,I,J,K,M,N,O,Q,R,S,T,U,V,W,X, Y,Z (then) WA,B,D,E,F,G,I,J,N,O,Q,S,U,V,W,X,-Y,Z (Except KC4AAA-AAF, KC4USA-USZ) It doesn't appear that we ever have to worry about Novice calls running out. There are more than 7 million of them!

No amateur ever has to change his/her call sign unless the licensee specifically requests it. There are no exceptions.

FAST & FURIOUS! Telecommunications News

¶ FCC flatly turned down two petitions filed by Mark A. Kolber (WB2WHC) and Karl Victor Pagel (N6BVU) seeking review of its decisions clarifying the relationship between coordinated and non-coordinated repeaters in the Amateur Radio Service - PR Docket 85-22. Petitions for Reconsideration must be filed within 30 days. They were not.

¶ Amway Corporation, the in-home cosmetics/housewares sales company, intends to become a door-to-door marketer of encrypted cable-delivered programming and plans to introduce its own (\$3,000) 10-foot home dish satellite setup this fall.

¶ Latrine rumor. We heard that FCC's Bob Foosaner, Chief of the Private Radio Bureau, (which, among other things, oversees the Amateur Radio Service) will be leaving the Commission - bound for a private sector law position and that Mike Fitch (his deputy) will take over PRB.

¶ The Amateur OSCAR-10 satellite has been awakened to limited use. Engineers were able to software correct what was termed radiation damage and Mode B was turned on last month.

¶ Radio Marti, the administration's answer to Cuba's news monopoly, could have a television counterpart. Dallas entrepreneur, Earl Jones, is lining up investors to beam American news telecasts to Cuba from a nearby Caribbean island.

¶ Much infighting going on in the AM-stereo broadcast band radio business. Motorola's C-Quam given clean bill by FCC after Kahn Communications (SSB stereo system) interference accusation. Although most consumers still do not know that AM stereo even exists, C-Quam AM stereo system is the biggest seller by far.

¶ Another interesting controversy involves a perpetual energy machine invented by one Joseph W. Newman, a self-educated inventor from Lucedale, Mississippi. He says his gadget generates more electrical and mechanical energy than it takes to run it. The patent

office says it can't work and won't issue him a patent. He is suing the government and a patent trial is set for December. The National Bureau of Standards tested his "more than 100% efficient" motor at a maximum of 67%. Newman's lawyer said NBS, being a federal agency, could not be impartial and that they tested only electrical and not mechanical energy since, unlike conventional motors, the circuitry's "magnetic collapse" is harnessed. So far Newman's battle has cost him \$400,000! Now Congress is involved! Seven bills have been dropped into the hopper ordering the PTO (Patent & Trademark Office) to issue the patent. He has already obtained patents in Spain and South America and at least one U.S. utility is interested in his machine since, at the very least, it is energy efficient!

¶ Tandy (Radio Shack) introduced three aggressively priced Intel chip based IBM clones (personal computers) two weeks ago. The \$1699 Tandy 3000-HL is IBM-XT compatible while the \$4299 (40 meg hard disk version) Model 3000-HD is compatible with the IBM-AT. The Tandy 1000 SX (\$1199) is supposedly twice as fast as the IBM-PC it emulates. Tandy advertising will focus on additional value rather than price alone. Tandy, with 22% of the business small computer market versus IBM's 45%, is increasing its outside sales force by 40%. They have recently been put on a new commission schedule. Tandy's Model 1200 and 2000 are being discontinued. New \$219 "Color Computer 3" also debuted.

¶ Franklin Computer Corporation, recovering from bankruptcy, has a new Apple II clone that is available through the Sears catalog. (\$799.99, \$949.99 with two disk drives.) Also rumored is that Sears will go with a new Franklin IBM clone as well - possibly private labelled.

¶ The federal government has bought some voice-actuated computer control interfaces at \$6,500 each. Called the Kurzweil Voicesystem, they plug into the IBM-PC or a similar clone. The gadget completely eliminates manual data entry since 1,000 words or phrases are recognized. A not yet introduced 5,000 word device has also been developed and will become the world's first voice-actuated word processor.

FCC-Extra Cl. Study Guide \$5.00 + \$1.50 postage
FCC \$Part 97 Rules Book \$4.00 + \$1.50 postage
license preparation materials as a reference to
applicants and VE's. All materials contain all questions, answers and discussion why answer is right!
FAST SERVICE!
SHIPPED FIRST
CLASS SAME DAY!

¶ August Happy Birthday to TRS-80 and IBM-PC! On August 26, 1977, Tandy introduced the Radio Shack TRS-80, the first completely assembled, ready-to-use microcomputer. Its chief competition was Commodore's PET, also introduced in 1977. IBM didn't introduce their PC until August 12, 1981. While microcomputing has become a multibillion dollar business, don't lose sight of the fact that it is still less than ten years old! Coincidentally, the first mechanical computer patent was also issued in August. (August 21, 1888, for the Burroughs Calculating Machine.)

¶ The nation's most successful clone maker is only a couple of years old! Houston's Compaq Computer went from zero to \$500 million in a single year! They just had a 75% earnings increase for the fiscal year ending June 30th.

¶ The launch of Japan's "JAS-1" Amateur Satellite has been delayed for a second time - this time due to a typhoon. New launch date now set for August 12 at 2030 UTC.

¶ Telephones on airliners and passenger trains, while innovative, apparently aren't very profitable. Financially troubled Western Union just dumped their "Airfone/Railfone" subsidiary. It was sold to GTE for \$39 million. Railfone and Amtrak began credit-card payphone service in June using land-based cellular systems. Calls cost \$7.50 from a plane, \$5 from a train for 3 minutes!

¶ The August 2nd edition of "Science News" discusses "Talking by Meteor." Engineers from GTE became the first to send a commercial spoken message via meteor trail. "The technique can be used during times when naturally occurring ionospheric disturbances interfere with communication by satellite or shortwave radio," it reads. Credited are amateur radio operators who have used "meteor burst" communication since the 1950's. GTE accomplished the meteor voice communication by writing software that digitizes and compresses the voice signal enough to bounce an entire message off one meteor trail.

¶ Those of you wishing to take the Amateur Extra Class radio operator examination after October 1st had better brush up on the

new VE/VEC program rules. The 400 question Element 4B pool is now 457. Section "BA" has 45 new questions most of which (39) are on volunteer examining. Section "BD" had one question deleted, Section "BG" has 3 added, and "BH" has 10 new questions. The new question pool and answers are available from us - Cost: \$4.00 plus \$1.25 postage. Some of the new answers are already obsolete due to the new VE/VEC program rules covered elsewhere.

¶ Comsat Labs in Clarksburg, Maryland, is looking toward the day when everyone has a home satellite station to receive high-definition television signals. They have developed a flat-phased array satellite antenna and a system to digitally compress HDTV signals from 25 to 7 MHz so that they can easily be transmitted by satellite. Their new Ku-band flat antenna, just 50 inches square and containing more than 4,000 copper elements, can pull in a current satellite signal as good as any commercial-quality dish antenna in use today! The advantage of flat antennas is that they can be mounted on the sides of buildings or roofs. The problem still to be solved is how to electronically steer the antenna economically. The answer is still a few years off.

¶ Directed by the ARRL's Executive Committee, the League's general counsel, Christopher D. Imlay, N3AKD, filed a very lengthy petition on August 5th with the FCC seeking a "notice of violation, imposition of forfeiture, other relief and a cease and desist" against the Pacific Gas and Electric Company (California) for violation of Part 15.25 - power line interference to amateur radio operation in the vicinity of Anderson, California. A study by Pacific Gas and Electric reportedly recommended a cure for the problem, but they are reluctant to spend the amount needed - supposedly in the millions of dollars - to clean up the airwaves.

¶ Arbitron estimates that 35% of all television households now have VCR's. The market with the highest penetration is Las Vegas with 59%. (32 million VCR's have been sold ...another 12 million will be sold this year!) The nation's toymakers have not let this go unnoticed! At \$30 to \$40 a whack, board and VCR (Virtually Certain Revenues) games will

be the newest fad in toyland this Christmas. Unlike most video games with joystick and control knobs, VCR games test memory and problem-solving skill rather than hand/eye coordination. VCR "Quarterback" football game is a current hot seller (300-400 thousand units sold!) ...along with "Doorways to Horror", "Predicaments" ...a soap opera game about the Flatt family narrated by Joan Rivers and many, many others. A \$100 million market could develop ...or it could bomb. (Remember twenty million people bought Trivial Pursuit last year.)

¶ In an effort to beef up amateur radio sales, Kenwood has a new program of Cash Rebates on selected amateur transceivers. You can get from \$10 (for handi-talkie) up to \$50 rebates (for TS-440S purchases) until September 30. Special certificate must be returned to Trio-Kenwood in California.

¶ Many amateurs worried that Reagan administration recommended ban on private payloads when shuttle launches are resumed will seriously impact the amateur satellite program! Ban recommended due to absence of fourth orbiter which will cost \$2.5 billion to replace! Administration wants to take NASA out of the private satellite launching business!

¶ The FCC battle with Dial-A-Porn is in the news again! Mandated by Congress, the Commission is still trying to figure out a way to way to keep sexually oriented phone calls out of reach of New York children. While FCC rules requiring credit card or personal identification numbers (PIN) of Dial-A-Porn callers took effect in all other states in May, a New York court determined that the new rules could not take effect there because of "technical shortcomings." The telco's 976 network does not allow for two-way access between the caller and the information provider. The FCC has noted, however, that New York Telephone may soon have a way for a caller to key in a PIN and has asked for comments on implementing the system in the future. The Commission is reluctant to re-examine use of telephone blocking devices due to high cost and potential installation problems. At least one adult message provider (Adult Entertainment Network, Inc. of Beverly Hills, CA) has been ordered to respond to charges that they are not requiring a credit card or a PIN.

¶ Not everyone is excited about desktop publishing and the new laser printers. The September 1986 issue of Science Digest advises readers to forget the concept - at least for the present. They said...

Good computers can be purchased for \$1,000. "It doesn't seem right to spend a multiple of your computer investment on an accessory." Desktop laser printers are actually desktop copiers and as such are likely to have the same problems and downtime. The annual \$470 service contract cost is too high. Each printed page costs 25¢. Laser printers are too slow, especially for the first copy which can take up to 4 to 7 minutes. Most Laser printers are based on an obsolete microprocessor - the Intel 8088. Exception is the Apple version. Atari hopes to sell a simplified laser printer next year for \$1,000. Current versions on the market cost \$3,500. Laser printers at present can not handle continuous form paper and must be sheet fed. They lack history and pedigree. Owners report wishy-washy printouts until the cartridge finally warms up. The word from Japan is that a more economical generation of lasers will be available in early 1987. Enough said.

HEMISPHERE-WIDE AMATEUR RECIPROcity

It is now a distinct probability that a hemisphere-wide bilateral amateur operating arrangement will be eventually adopted - sort a western hemisphere amateur radio license if you will.

A specialized interest area called the Inter-American Telecommunications Conference operates under the auspices of the Organization of American States. Formed in 1948, the OAS is made up of most nations comprising North, Central and South America and some caribbean islands. Cuba (expelled in 1962) and Canada (owing to its involvement in the British Commonwealth of Nations) are not members.

The OAS agency deals with all matters relating to telecommunications. The official language of the group is Spanish and the initials of the Inter-American Telecommunications Conference (in Spanish) are CITEL.

CITEL, along with the many items on its agenda, has begun to consider some

arrangement whereby the member nations can afford temporary operating privileges to licensed amateurs of the respective countries when they visit other member countries.

CITEL meets every four years. During the years in which it does not meet, its permanent Executive Committee meets. The initials of this committee (also in Spanish) are COM/CITEL. They meet every year between CITEL conferences. COM/CITEL has been very active in developing an amateur radio agreement that would cover OAS member states.

The FCC's Ray Kowalski, Chief of the Washington, DC, Special Services Division attended the COM/CITEL meeting last month held in Mexico City as part of the U.S. delegation which is headed up by the state department and contains a representative from NTIA, the National Telecommunications & Information Administration. I discussed the meeting with him when I was in Washington last week.

One of Kowalski's special responsibilities as a member of that delegation was to work on the document pertaining to the OAS multi-nation amateur radio agreement that has been in formulation for some two years. All of the comments at this conference from members of CITEL were considered, debated and formulated into a draft final version.

"We now have a draft of what is called the Inter-American Amateur Radio Convention," Ray said. The final document will have treaty status and as such, after being signed will have to go back to the various governing bodies of the member states for ratification - in our case, by Congress. The agreement goes into force after a given number of countries ratify the agreement. Additional countries become subject to the treaty as they ratify it."

The agreement provides for a way in which nationals of one member state - who are licensed as an amateur radio operator by that member state - can send off to one of the participating member states advising that he intends to visit and wants permission to operate in that country. "That may not sound

like it is much different from the bilateral reciprocal arrangements now in effect. The significant development is, of course, that it would be much broader and have the potential for including all of the nations which are members of OAS."

"One of those is Mexico with which no reciprocal operating agreement now exists. Mexico has shown a great deal of interest in this agreement and has almost taken the lead in developing the document."

Ray said that it was "hard to say" if amateur efforts during the Mexico City earthquake disaster played a part in Mexico's interest. "There is nothing official," he said, "but the preamble to the document contains the phrase 'convinced of the benefits of amateur radio operation...' I think that phrase certainly reflects the opinion of the nations of the good work that amateur radio accomplishes. The Mexican earthquake disaster activities has to be at the top of everyone's mind. It went a long way toward favorably predisposing the various member states to work on this agreement."

Ray told me that the damage and devastation in Mexico City is still very much in evidence throughout the city.

The document is now being sent out to the member nations for their final opportunity to comment on it. It will be put into a final form at the next meeting of COM/CITEL - the permanent Executive Committee - which is scheduled for May in Mexico City. At that time the document will get its finishing touches and prepared in final form to be transmitted by the Executive Committee to the full meeting of CITEL ...scheduled for November 1987 in Lima, Peru.

The scenario is that the various administrations will then sign the convention and the process of ratification will begin, "...which could take weeks, months or years depending upon how quickly the administrations move on the agreement," Ray noted. "The amateurs in their respective countries need to let their governing bodies know of its importance to them so they will be motivated to act promptly on ratification."